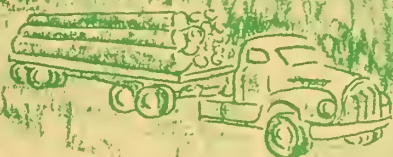


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MULTIPLE-USE HIGHLIGHTS

Pacific Northwest Region
1958



U. S. Department of Agriculture
Forest Service

REGIONAL OFFICE DIVISIONS AND FORESTS

R-6

Regional Forester

J. Herbert Stone

Box 4137, Portland 8, Oregon

<u>Division</u>	<u>Chief</u>
Engineering	R. F. Grefe
Fire Control	Alfred E. Spaulding
Fiscal Control	Reed H. Jensen
Information & Education	L. G. Jolley
Operation	P.F.W. Prater
Personnel Management	Dan E. Bulfer
Range & Wildlife	Avon Denham
Management	
Recreation & Lands	Frank B. Folsom
State & Private Forestry	Thomas H. Burgess
Timber Management	Walter H. Lund
Watershed Management	Kermit W. Linstedt

<u>Forest</u>	<u>Supervisor</u>	<u>City</u>
Deschutes	Ashley A. Poust	Bend, Oregon
Fremont	Clayton N. Weaver	Lakeview, Oregon
Gifford Pinchot	C. Glen Jorgensen	Vancouver, Washington
Malheur	J. Malcolm Loring	John Day, Oregon
Mt. Baker	Harold C. Chriswell	Bellingham, Washington
Mt. Hood	Paul E. Neff	Portland, Oregon
Ochoco	Cleon L. Clark	Prineville, Oregon
Okanogan	Chester A. Bennett	Okanogan, Washington
Olympic	Lloyd G. Gillmor	Olympia, Washington
Rogue River	Carroll E. Brown	Medford, Oregon
Siskiyou	H. C. Obye	Grants Pass, Oregon
Siuslaw	Rex W. Wakefield	Corvallis, Oregon
Snoqualmie	Laurence O. Barrett	Seattle, Washington
Umatilla	Charles M. Rector	Pendleton, Oregon
Umpqua	Vondis E. Miller	Roseburg, Oregon
Wallowa-Whitman	John B. Smith	Baker, Oregon
Wenatchee	John K. Blair	Wenatchee, Washington
Willamette	Robert Aufderheide	Eugene, Oregon



1958

MULTIPLE - USE HIGHLIGHTS

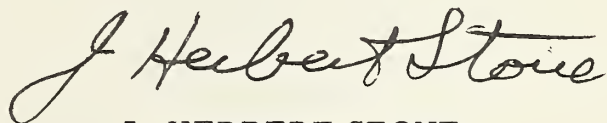
PACIFIC NORTHWEST REGION

This review of the activities of the U. S. Forest Service, Pacific Northwest Region, discusses our plans and programs, our progress in 1958, and some problems we face. It includes national forest administration and cooperative programs in state and private forestry.

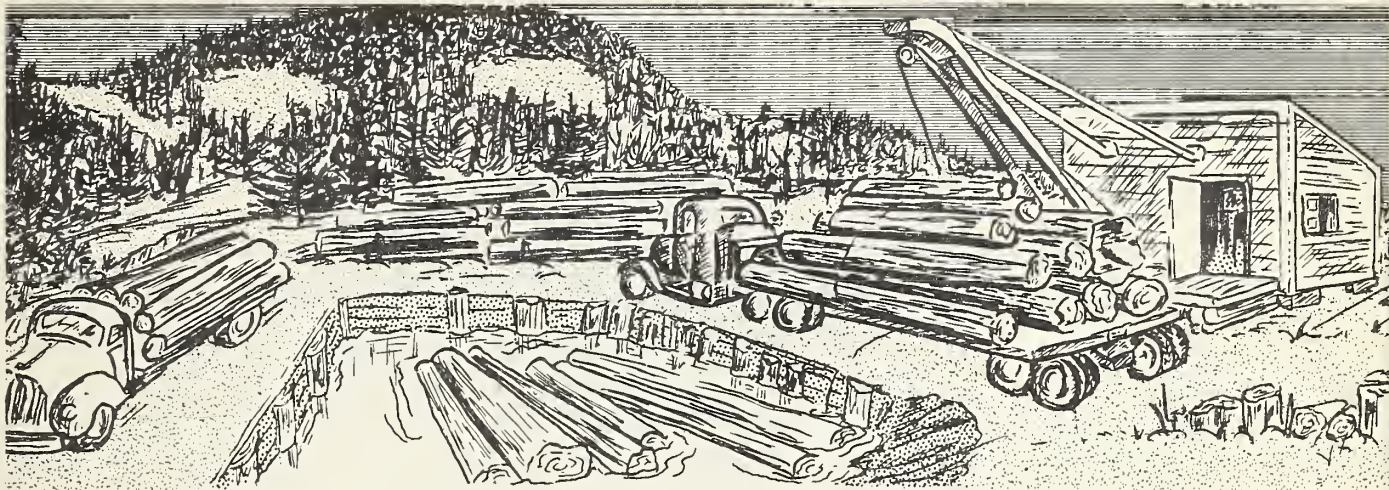
The United States is experiencing the pressure of increasing population on natural resources. Not only are there more people using the national forests, but there is more use per person, and these public lands must continue to contribute to the welfare and economy of our people.

It seems increasingly clear that the greater demands upon our resources will be most nearly met under the principle of multiple-use management. By fully recognizing the current and longtime needs of people and the capacity of the land under coordinated management to meet these needs, an area as large as a ranger district or forest can have many uses and yield many values without serious conflicts of uses and users.

Any comments you care to make on our work will be welcome and given thoughtful consideration.



J. HERBERT STONE
Regional Forester



Although the Pacific Northwest Region has a greater volume and value of timber cut than any other national-forest region, the other values are also vital.

TIMBER MANAGEMENT Plans and Programs

It is our desire and objective to harvest the full allowable annual cut from each working circle. During 1959 we expect to harvest approximately 3.2 billion board-feet. We plan to sell approximately 4 billion board-feet. We will continue to seek prompt regeneration of cutover land. We are working toward the goal of converting brushfields into productive forests. We plan to intensify the genetics and seed production efforts aimed at improvement of forest trees. We are proceeding vigorously toward completing new and modern inventories on all working circles by 1960 and the prompt recalculation of allowable annual cut quotas. Timber damaged by insects, diseases etc., will be salvaged as quickly as possible to avoid losses. Blister rust control will be continued and we will pursue the long-range solution by seeking to develop rust resistant trees. We will try to stay at least one year ahead of our sales program on acquisition of perpetual, unencumbered right-of-way easements. A seed orchard project for Douglas-fir, western white-pine, sugar pine and ponderosa pine is planned on the Umpqua Forest. We are considering a pilot ponderosa pine seed orchard on the Deschutes. Cone collection from better quality trees is one of the first steps in tree improvement, and we will try to locate at least 12 more seed collection areas. We will continue with hybridization of Apache-ponderosa(Deschutes)pine, and initial work will be done in crossing Monterey-knobcone(Siskiyou) and Himalayan-sugar pine in 1959.

Progress, Calendar Year 1958

Timber Sales

The tabulation below shows the volume and value of timber cut and sold during 1958 as compared to the previous two years.

Calendar Yr. :	<u>Sold</u>		::	<u>Cut</u>	
	Volume (MBF) :	Value (\$)		Volume *(MBF) :	Value (\$)
1958 :	4,371,075 :	62,277,801 ::		3,098,855 :	57,205,511
1957 :	2,708,171 :	48,854,143 ::		2,510,106 :	55,374,395
1956 :	2,866,708 :	73,572,685 ::		2,734,073 :	63,334,681
:	:	::		:	:

*Thousands of board-feet.

While the volume cut in 1958 was 588,749 MBF greater than that cut in 1957 it is still only 84 percent of the region's present total allowable annual cut of 3,677,000,000 board-feet. Market conditions continue to be an important reason for the lower cut volume. The substantial increase of 1,662,904 MBF in volume sold in 1958 as compared to 1957 should result in a greater cut during 1959. The estimated volume of uncut timber under contract increased from 5,562,451 MBF on 1/1/58 to 6,834,671 MBF as of 1/1/59. The volume and value of timber sold in 1958 was contained in a total of 3,871 sales. In addition, we made 1,016 sales of nonconvertible forest products with a total value of \$77,012.

Planting and Stand Improvement

Over 15 million trees were planted on 29,830 acres of national forest land during fiscal year 1958. Our nurseries at Wind River and Bend produced 13.4 million of these trees. We seeded an additional 670 acres bringing the total of reforestation work to 30,500 acres. Knutson-Vandenberg law funds were used to finance this work on 28,570 acres. (The Knutson-Vandenberg law, in effect since 1930, provides that the purchasers of national forest timber may be required to deposit money for reforestation and other specific stand improvement work on areas cut over in the course of the sale.) The remainder of the work was financed with money appropriated by the Congress. This year's planting and seeding boosted the cumulative total area of national forest land successfully reforested in this region to more than 256,000 acres.

Stand improvement work was done as follows:

Thinnings (not saleable)	9,900 acres
Tree pruning	32,200 acres
Plantation release	200 acres

The war on porcupines was continued.

Road Rights-of-way

We are determined to get permanent access required for management of the national forests for all uses. In the past there has been reluctance in some instances to resort to condemnation. The Chief of the Forest Service stated to the 49th Pacific Logging Congress, November 12, 1958, at Portland, Oregon, "In the future, condemnation procedures will be used wherever these needed rights-of-way cannot be obtained with reasonable promptness through negotiation."

During the year satisfactory rights-of-way procedures were worked out with the Washington State Department of Natural Resources.

Right-of-way action was taken as follows:

Right-of-way easements approved by Attorney General	37
Right-of-way easements approved at regional level	123
Routine easements completed entirely at forest level	72
Right-of-way easements being processed	25
Appraisal reports contracted - (No. of tracts)	13
Condemnation cases consummated	1
Cooperative road construction agreements signed	3
Cooperative road construction agreements being negotiated	8
Road-use agreements signed	8
Road-use agreements being negotiated	2
Federal Power Commission action pending	<u>1</u>
Total	293

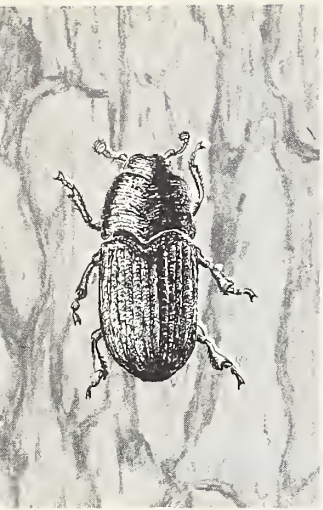
Genetics and Seed Production

The first Douglas-fir seed orchard was established on the Olympic forest. Even though the trees are very small as yet, a December 1958 survey revealed that there is an average of two healthy cone buds and one pollen bud per grafted scion in this orchard. (A scion is a small branch cutting from a mature tree.) Grafting of over 2,000 scions, partial release from vegetative competition and application of fertilizer were accomplished April 1 - May 15, 1958. It is too early to credit flower production to any one factor, but sufficiently detailed records will be maintained to permit drawing conclusions later.

Three Douglas-fir and two ponderosa pine superior seed-production areas were found. Preliminary reconnaissance was completed to lay out four superior seed collection areas for Douglas-fir and two for ponderosa pine.

As a step in the development of blister-rust resistant strains of western white and sugar pines, 91 additional trees were located, making a total of 178. Controlled pollination was completed in 92 bags that had been placed on 9 western white pines. It is planned to place 1,000 pollination bags on 40 trees in 1959.

Forest Insects



Salvage of Pacific silver fir attacked by the balsam woolly aphid continued on the Gifford Pinchot Forest. Areas on the Rogue River, Siskiyou and Umpqua national forests, attacked by the Douglas-fir bark beetle, are now being logged. Following special surveys on the Ochoco Forest, salvage logging of the areas most severely infested by the western pine beetle was started in November.

The eighth successful spruce budworm control project was accomplished during 1958 by aerially spraying 818,050 acres of timber in the Blue Mountains of Eastern Oregon. The cost of \$0.69 per acre was an all-time low. No injuries to personnel or damage to equipment occurred. Results were excellent - 96.2% of the insects killed.

Forest Diseases

Special surveys of mistletoe infection were made on the Rogue River forest to locate and map infected stands. Similar surveys were made of dwarf mistletoe in young ponderosa pine stands of the Deschutes forest where a small-scale project is now underway to test control methods.

Management Plans & Inventories

During 1958 field work was completed on inventories for eleven working circles situated in eight different forests. Five more working circle management plans were approved by the Chief and six other plans are being reviewed at the regional office. It now appears that new inventories and recalculation of allowable cuts can be completed by the end of 1960.

Problems

Securing prompt regeneration of cutover land and protection of the trees until they mature is difficult and perplexing. More research is needed in many phases of this work. Trees are susceptible, for example, to damage by rodents, porcupines, disease, insects, sun scald, brush competition and improper thinning and pruning practices. Continuing attention to these and other factors will always be needed.

Insufficient timber access roads is the major obstacle to harvesting the full allowable cut from many working circles. Shortage of trained personnel and increasing costs also handicap timber management activities. To secure easements for rights-of-way we must get farther ahead with road engineering. We must continue to obtain satisfactory replacement of timber access roads around reservoirs.

We have a big job of reforesting old burns now occupied by dense brushfields. Treatment of the brushfields by scarification, spraying with herbicides, and other measures have been tried. This type of work must be intensified. Efforts to develop strains of white pine resistant to blister rust must be expanded.

Spruce budworm spraying will not be needed in 1959. Balsam woolly aphid infestations continued to spread in the alpine fir types of the Cascade Mountains. Bark beetle infestations increased significantly:

1. In southwestern Oregon the Douglas-fir beetle reached epidemic proportions in many drainages. Much timber has been killed.
2. Western pine beetle attacks increased greatly in extent and severity, particularly on the Ochoco.

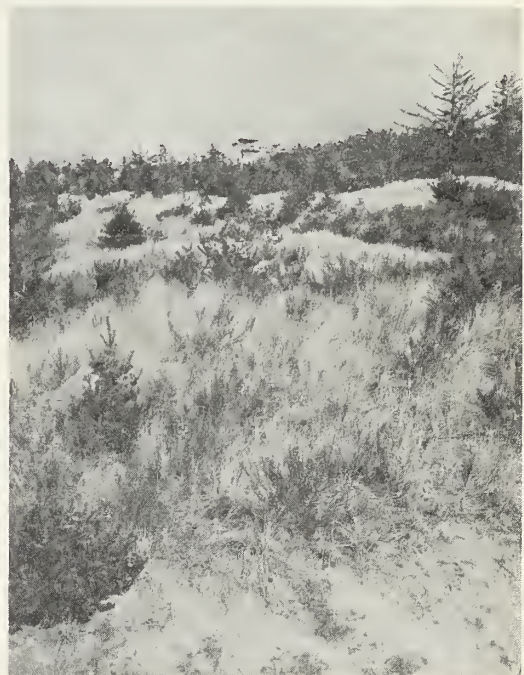
Areas infected with dwarfmistletoe must be logged as rapidly as possible to reduce loss of timber and to regenerate with healthy trees. In many instances the Douglas-fir bark beetle moves into stands of mistletoe-weakened trees, a disastrous combination of forest enemies.

WATERSHED MANAGEMENT

Watershed management is not one but many activities, all aimed at protection, conservation, and use of the resources of a drainage basin in ways that keep the soil mantle in place and make water available in the manner best serving human needs. Toward this end, we are developing multiple-use plans. Multiple use is a principle of management rather than a system or method of land use, and involves combining uses of land and resources in such fashion that maximum use consistent with management aims is realized.



Sand dunes before
stabilization



Sand dunes after
stabilization

Plans and Programs

Two major jobs in national forest watershed management are protection of what we have and rehabilitation of what we once had. Improved watershed protection is planned through reorganization of the work, addition of personnel, and greater attention to job details in every activity affecting soil and water. Watershed rehabilitation plans call for starting and continuing projects in sand dune stabilization, erosion and runoff control by contour trenching and seeding, clearing floatable debris from stream channels, and restoration of areas damaged in old logging operations.

The soil survey program includes the pilot soil and vegetation survey on the Umpqua national forest (which is 40 percent complete), and an evaluation of land characteristics mapping on the Olympic national forest in cooperation with Washington State College (90 percent complete). Both jobs will be continued to completion. The soil and vegetation survey will be extended to other national forest lands as rapidly as possible, using methods developed on the pilot survey.

Field examinations, project feasibility studies, and workplans for recommended forest land treatment measures will be completed for current small watershed project applications, and for any that may come in. Work will continue to be done in cooperation with the State Foresters wherever non-Federal forest land is concerned.

Participation in Columbia Basin Inter-Agency Committee activities and with the Northwest Forest Soils Council will continue, aimed at resolving inter-agency conflicts and coordinating programs of mutual interest.

Hydroelectric power development applications pending with the Federal Power Commission and affecting national forests of the region total nineteen. Six major hydroelectric projects, two reclamation projects, and two flood control projects now under construction affect national forest lands and management. The Corps of Engineers and the Bureau of Reclamation are currently studying several other projects that will also affect the national forests. To minimize effects of projects on national forest land we will continue to coordinate, with construction agencies, all plans and activities on projects under construction. We will make studies of impacts of proposed projects. These activities are given high priority.

As national forests become increasingly important to and are used by more and more people, we believe that public interests can better be served by intensifying multiple-use management application. The Region Six goal is the completion of detailed multiple-use plans for each of the 111 ranger districts by the end of 1960.

Progress

The Mission Creek Watershed Protection and Demonstration Project work was completed in 1958. Total accomplishments on this 82-square-mile watershed on the Wenatchee National Forest during the five-year project period included construction of 28 miles of trail, ten miles of fence, six miles of streambank stabilization, ten miles of channel clearing, stabilization of 400 acres of actively eroding slopes, and drainage improvement and erosion control on four miles of road.

Watershed rehabilitation work included 300 acres of sand dune stabilization on the Siuslaw National Forest; 320 acres of contour trenches and seeding with grass on the Rogue River, Wallowa-Whitman, and Wenatchee National Forests; drainage improvement, gully plugs, and seeding with grass on 600 acres of old logging area on the Fremont National Forest; channel debris removal from streams on the Wenatchee and Willamette National Forests; and channel realignment and bank protection on streams on the Okanogan and Snoqualmie National Forests. These projects are in varying stages of completion. They were financed from funds specially designated for soil and water improvements.



Sparsely covered actively eroding area in need of contour trenching and seeding.



Channel filled with floatable debris in need of clearing to remove a flood hazard.

Cooperation continues with other Department of Agriculture Agencies in making the National Inventory of Soil and Water Needs.

New applications came in from local sponsors for assistance under Public Law 566, the Small Watershed Protection Act, on three watersheds in Washington and six in Oregon. Planning land treatment and associated measures for runoff and erosion control was begun or continued on five watersheds in Washington and six in Oregon, with the help of State Foresters in both states. Two watersheds in Washington and three in Oregon included national forest land, while all of them included State or private forest land.

Participation in Columbia Basin Inter-Agency Committee activities continued, with working membership on the Executive, Hydrology, Pollution Control, and Mosquito Control Subcommittees. Under inter-agency authorization, Forest Service reports on impacts of water impoundment projects affecting national forest resources and management were given to the Corps of Engineers, North Pacific Division, for inclusion in their Water Resource Development - Columbia River Basin report released in December. Watershed management personnel also worked with the Oregon State Water Resources Board on the Alsea Basin study, and with the Society of American Foresters in preparing specifications for watershed protection in timber harvest operations.

In 1958 there were 115 active hydroelectric power projects affecting national forest lands in Region Six. On several of these projects, and on others for irrigation water storage and flood control, coordination of plans and activities with those of the construction agencies was initiated or continued to reduce project effects on national forests.

Problems

Good watershed management requires close attention to every activity on the land. For example, road construction disturbs soil and changes drainage patterns; concentrated use of an area by animals or men may destroy vegetation and impact soil, with far-reaching effects. Uses must be managed in such a way as to keep land disturbances to a minimum, keep soil in place and keep water supplies cool and clear. Basic data must be secured to guide management operations. We must know more about forest soils and how to manage them. We must recognize the impacts of all forms of land management activities on the basic soil and water resources, and take positive steps to minimize those impacts. Moreover, the rapidly expanded use of the national forests have created unprecedented demands for their various products and values by numerous interest groups. These demands are often conflicting and must be resolved.

RANGE AND WILDLIFE MANAGEMENT
Plans and Programs

Range Management

Our current program emphasizes three important items which are:

1. Recruitment and training of foresters with range education and experience.
2. Range analysis and management planning as a basis for better use and coordination of the range resource with all other resource activities.
3. An expanded range improvement and revegetation program to rehabilitate the forage resource and bring better management and protection.

Present plans call for completion of the range analysis program by 1964. Our accelerated training and recruitment plans call for assignment of range-trained foresters on all forests where range analysis and management planning is needed. Our goal is revegetation treatment of 115,000 acres of forest rangeland during the next five years.

Efforts are being made to secure additional cooperative assistance from stockmen permittees in the construction and maintenance of range improvements.

Wildlife Management

The State of Oregon adopted the Unit Management system of hunting big game in 1958. Under this program hunters are directed by permits to the heavily populated game units. Hunting results were somewhat disappointing because of universally hot, dry weather during the hunting season.

Extensive game management plans have been completed for all forests. These plans give the steps required for coordinating game management measures with other forest activities.

Personnel of the Oregon Game Commission, Pacific Northwest Forest and Range Experiment Station and Fremont National Forest are cooperating in a study of the Silver Lake deer herd. The study should furnish basic information on deer-live-stock relationships, forage use, game numbers, and hunter success.

As game populations increase, damage to tree reproduction by big game animals is increasing. Studies are in progress on the Olympic forest to measure damage to natural and artificial tree regeneration in areas of heavy elk concentrations. These consist of transects established inside and outside fenced control plots in planting areas to determine the extent of browsing and trampling damage and the time of the year when it occurs. Fencing of clearcut areas for plantation protection is being tried experimentally. Artificial seeding of grasses to draw elk away from plantation areas is another method being tested.

Note: Transects are lines of permanent study plots.

Progress

Range Management

Livestock forage conditions were average on most national forests but slightly below the 1957 level. Actual numbers of livestock grazed on forest lands in the Pacific Northwest Region during 1958 were:

Cattle and horses - 87,395

Sheep - 139,055

This represents an increase in cattle numbers and a decrease in sheep when compared with 1957.

Since livestock prices were up in 1957 grazing fees also rose. Grazing receipts for 1958 amounted to \$229,075.14.

Intensive training is being continued in the range and wildlife field. One hundred forty-one forest officers received training in one or more phases of our program.

Range Analysis

The range analysis program received added impetus during the year. Additional funds for wildlife management and game range analysis permitted us to develop more trained manpower. It was possible to expand the program to provide at least one trained man either full or part time for all of the twelve forests which furnish most of the grazing.

Thirty-four cattle and eleven sheep allotments had been completely analyzed, plans developed and put into effect on July 1, 1958. By July 1, 1959 an additional 127 cattle allotments and 41 sheep allotments will have been completed, the plans developed and in effect.

Range Improvements

All structural developments that contribute to the protection or betterment of national forest ranges are classed as range improvements. An increase of \$22,400 enabled us to make more progress in needed range improvement projects. Additional funds were contributed by the livestock permittees and resulted in a construction program of slightly over \$145,000. Of this construction program \$66,439 was contributed by the permittees running stock on the national forests. Also, existing developments were maintained at a cost of \$120,391. The permittees contributed \$75,345 or 63% of the total cost in cash, labor or materials.

RANGE SEEDING

This stand of seeded grasses will furnish good forage, protect the soil from erosion and retard rapid runoff of excess water.

Before treatment, this area supported only worthless tarweed.



SPRAYING SAGEBRUSH

This area has a good stand of grass under the sagebrush. The elimination of a large percent of the sagebrush will allow grass to increase. As an average, forage has been increased by three times through spraying.



WATER SPREADING

Simple structures like this along with a system of ditches are used to spread water over meadow.

Benefits include:

1. Increased forage.
2. Control of channel erosion by breaking up large head of spring runoff water.



REVEGETATION TREATMENTACRES BY YEARS

	<u>1956</u>	<u>1957</u>	<u>1958</u>
Seeding depleted ranges	3,716	5,462	8,675
Spraying sagebrush	3,155	3,870	4,476

An additional water spreading system was installed on a dry meadow for restoring and increasing forage production. This means that we now have irrigated a total of 1,174 acres of dry mountain meadow with a high potential for grass production.

Invading weed tree species, principally lodgepole pine, were removed from 313 acres of natural meadow grassland. This brings the total of such treatment to 979 acres.

Wildlife

Big game and livestock range analysis are being done together. Browse utilization studies on big game ranges are being carried on by all east-side forests. Several additional game exclosures were constructed during the year to furnish basic data to the states for their game management programs.

Three special hunts were conducted cooperatively on the city watersheds of Corvallis and The Dalles, Oregon and Walla Walla, Washington. They were very successful and were primarily for protection of the soil and watershed resources from game damage.

Two hundred and fifty acres of big game range in the Diamond Peak area of the Umatilla forest were seeded to range grasses in cooperation with the State of Washington Game Department. This was in addition to 100 acres seeded in 1957. These were for the purpose of restoring depleted elk range.

ProblemsRange Management

Our greatest deficiency is lack of adequate, up-to-date management plans which form the basis for the best cooperative action by the forest officers and permittees.

Existing plans point up the need for more range improvements. As new plans are made this need will probably be apparent on many more allotments.

We must have livestock and big game range analyses before we can make effective range management plans.

We have a big range revegetation job to do. Our present progress is 12,000 to 15,000 acres per year. At this rate it will require about 25 years to complete the planned program.

Wildlife Management

Big game populations are increasing. In spite of substantial hunter success, greater game harvests are needed to protect the forage resources as well as tree reproduction. Most big game ranges are stocked to capacity, and further increases in game numbers are detrimental to watershed values. Game harvest, the most important single factor in game management in this region at present, is under State regulation. The Forest Service and the game departments of both Washington and Oregon cooperate closely. Together we have a common task of fully convincing people why the animal population must balance with available forage.

A loss of fish life occurred in two streams as a result of the spruce budworm spray project on the Malheur forest, according to studies conducted by the Oregon Game Commission. After a thorough investigation by both agencies, it was determined that the loss was caused by double spraying the drainages, inadvertently. A plan is under study to prevent this on future insect spraying projects.

Stricter standards of operation have been established for loggers and road builders to prevent accelerated erosion, stream siltation and the creation of barriers to fish migration by log jams and faulty culvert installation.

Some damage has occurred to the very important bitterbrush browse while spraying to eliminate sagebrush. Timing of spraying seems to be the solution to killing only sagebrush. This has our close attention.

RECREATION AND LANDS

Plans and Programs

Under the five-year Operation Outdoors program, started two years ago, we planned to catch up with recreation needs. We were unable to do all work scheduled for the first two years. Because of this and greater-than-expected numbers of visitors we have had to postpone new developments in favor of rehabilitation.

A conditional permit for the development of a 1400-acre winter sports area in the Snoqualmie Forest, 75 miles from Seattle, six miles off the Chinook Highway U. S. 410, was awarded on December 3 to Crystal Mountain, Inc. Depending upon the success of the corporation in raising sufficient funds for initial development and in arranging for road access, this may become one of the largest developments in the Nation.

Notice of intention to establish the Glacier Peak Wilderness Area within the Mt. Baker and Wenatchee National Forests will be made public at an early date and hearings on the proposal will follow. This culminates an intensive study of multiple-use management of this attractive area. Multiple-use management studies will be made during 1959 on those ranger districts of the Mt. Baker and Okanogan Forests that include the North Cascade Primitive area.

Where possible we will increase efforts to eliminate parcels of private land inside the forests through land exchanges. We are increasing the posting of boundaries between national forest and private lands to make our work easier.

We have recommended to the Chief a new system of record keeping for land status. We plan a 5-year program to check and completely revise our land status records. Land status on at least two forests will be checked in 1959.

It is planned to continue the determination of surface rights work as planned under a 10-year program. This will involve examination and publication of about 1,120,000 acres in 1959 and the examination of claims for determination of surface rights, patent applications and claims of doubtful validity that are in conflict with proper management of national-forest land.

Progress

Summer Recreation

Recreation use increased to a record high of 7,874,600 visits. We were not able to complete all the rehabilitation, expansion, and development of new areas for which we originally planned, but the following progress was made in 1958:

Number of campgrounds rehabilitated	109
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Number of individual camping units rehabilitated	1,158
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Number of new campgrounds constructed	12
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Number of new individual camping units constructed	152
--	-----

Supervision, policing, sanitation, cleanup, and maintenance were accomplished at all of the campgrounds.

The National Forest Outdoor Recreation Resources Review is being started this year. Specific objectives are to make an inventory and evaluation of recreation resources and to formulate policies, plans, and programs adequate for future needs. This information, in turn, will be supplied to the National Outdoor Recreation Resources Review Commission, which was appointed by the President.

Winter Sports

Use of the national forests for winter sports recreation increased 17% over last year. The 27 winter sports areas, located in the higher mountains, not only provide winter recreation opportunities, but also make a substantial contribution to the economy of nearby communities and cities.

On January 3, the Northwest's newest winter sports development at Bachelor Butte, on the Deschutes Forest near Bend, Oregon, was formally dedicated. The construction of a lodge, Pomalift, and two tows by the Mt. Bachelor Corporation at this excellent location seems to be well justified, according to use so far.

Mineral Resources

To date, for determination of surface rights under Public Law 167, about 4,309,250 acres have been examined, of which 3,163,658 have been submitted for publication.

Verified statements covering 1,846 claims have been filed by 249 claimants. Waivers have been obtained on 133 claims.

During the year, more than 500 claims were examined involving 70 in connection with patent application, 80 to determine validity because of resource conflicts, and approximately 350 for determination of surface rights. Four hearings were held under Public Law 167. In two cases the Government's right to manage the surface was sustained. Final decision is pending in the other two cases.

Land Uses

Land management studies of the Waldo Lake area on the Willamette and Deschutes forests have been completed in draft form and are now receiving final study.

Consolidation of national-forest lands through exchanges with cooperating private companies and individuals and with the States proceeded at a moderate rate in 1958. Public Law 85-833, enacted August 8, 1958 (79 Stat. 987) extended the boundaries of the Siskiyou National Forest to include land highly valuable for recreation along the Rogue River. This makes possible the acquisition of these lands by the exchange procedure.

Problems

The broken-up pattern of land ownership in some R-6 forests presents administrative difficulties to Government and to private management. It requires surveying and posting boundaries between Federal and non-Federal lands.

As mentioned earlier, the multiple resources of national-forest land in Region 6 are increasingly in demand because of rapid population growth and many other factors. We have about 300,000 acres restricted to single use by special-use permits and agreements. It is important that these restrictive uses be examined through multiple-use management studies and other means to determine and provide for making the best use of the land.

FIRE CONTROL
Plans and Programs

Replanning Project

The Forest Service will be undertaking a large fire replanning project in 1959. It is designed to completely analyze fire control needs, giving full consideration to past performance, modern firefighting methods, changes in fuel types, increased uses of the forest and increased value of resources. It will be a two-year project and will result in up-to-date firefighting plans for each ranger district and forest.

Training

We launched a program of Fire Behavior Training in 1958. This is designed to make fire overhead more aware of the effects of weather, topography and fuels on the rate of fire spread. The results should be more effective fire control work and less chance of disastrous fire "blowups". The program will be continued in 1959 until all key firefighting people have received this specialized training.

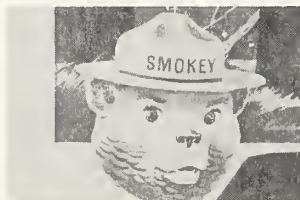
Progress

The Forest Service, along with other protective agencies in Washington and Oregon, was faced with one of its most severe fire seasons in 1958. This was the result of the combination of an exceptionally hot, dry summer and heavy fire occurrence. Some forests, especially those in northern Washington, reported the most severe fire weather since records have been kept. The occurrence of fires was the highest since 1941. Most fires were caused by lightning with the number from this cause being the fourth highest since records were started in 1908. Man-caused fires were the highest since 1952, largely because of the very dry forest fuels.

In spite of these potentially disastrous conditions, burned area in the Forest Service protective areas was comparatively low. Only 19,190 acres of the 25,500,000 acres protected were burned and 10,000 of these were in one brush and grass fire on the Wenatchee forest in late August. A large part of the success in controlling most of the fires while small and holding down the total burned area was due to much greater use of aerial facilities and other modern firefighting methods.

Following are the fire statistics for 1958 compared with recent years:

<u>No. fires</u>	<u>1958</u>	<u>1957</u>	<u>5-Yr. Ave.</u>
Lightning	1,397	479	970
Man Caused	520	443	379
<u>Acres Burned</u>	19,190	1,145	4,397





Air tankers were used this year for the first time on an operational basis to cascade borate "slurry" and "wet water" onto fires.

Aerial Program

Fourteen air-tanker airplanes stationed at Wenatchee, Washington and LaGrande, Medford and John Day, Oregon, dropped a total of 122,290 gallons of sodium-calcium-borate solution which acted as a fire retardant, and 77,320 gallons of "wet water" (water that has been treated with a detergent so that it will soak readily into forest fuels). This borate and wet water were dropped on a total of 69 fires in the region and were judged to be a material aid in reducing the potential burned area and damage.

Twelve helicopters, 10 of which were used at one time, were used on 63 fires on 7 of the 19 national forests in Region 6. They flew a total of 900 hours, making 2900 flights and carrying 4,500 passengers and 155,900 pounds of freight. They were a valuable aid in getting men and equipment to fires quickly and retrieving smokejumpers and other key personnel so that they could be used in other dangerous situations. The helicopters were all privately owned and used under rental agreement during the fire emergencies. These machines are expected to have a greater part in fire control plans as more suitable types become available in areas where needed.

A total of 561 fire jumps were made by our 75 smokejumpers stationed on the Siskiyou National Forest in southern Oregon and on the Okanogan forest in northern Washington and by jumpers from other regions, sent in to help. These jumpers were especially valuable since many of our fires were in the very inaccessible places. They extinguished many of the fires while small and held others in check until ground forces could arrive.

Other aircraft, both Forest Service owned and commercial planes under rental agreement, flew a total of 5,502 hours in detecting fires and hauling men, equipment and supplies to fires in the back country. They were used to drop a total of 249,759 tons of cargo and to transport many fire personnel.

Ground Equipment and Facilities

Trail builders, tractors, plows and bulldozers were used to construct 289,608 feet of fire line on 112 fires. Most of this equipment was rented from logging companies and other private operations in or near forest areas. Tank trucks were used on a total of 500 fires in the region. They were a material aid in controlling many fires while small.

Problems

Slash or Debris

The creation of hazardous debris from logging operations, reservoir clearings and other forest activities continues to be one of the major fire control problems of the region. After a particularly hazardous fire season, favorable weather and intensified efforts resulted in burning about 35,000 acres in clear-cut types and 17,000 acres of piled slash in selectively cut areas in 1958. In addition to this actual disposal work, over 52,000 acres were released without burning after having been provided extra protection or treated in other ways until the hazard returned to normal. About 400,000 acres of slash areas are now receiving extra protection in lieu of burning.

Increased Use

Problems arising from the greatly increased use of all the resources of the national forests are being felt in fire control work. The Keep Green and nationwide Smokey Bear Fire Prevention Programs are having their effect in making the forest-using public more aware of fire dangers; however, a continuing effort is needed in on-the-ground contacts and instruction work to show people how they can fully use the valuable forest resources safely.

ENGINEERING

Plans and Programs

In the Pacific Northwest Region, with its rugged terrain and large volume of business, the programming of engineering services is a big and complex job. It involves engineering of roads, trails, water developments and bridges, architectural plans, and engineering analysis of the impacts of reservoirs and power systems. We have been constantly seeking to improve methods and planning and to program our work according to sound multiple-use objectives.

Roads and Trails

Work Planned Through Timber Sale Contract

Road construction and reconstruction	1,601 miles	\$27,530,000
Road maintenance	8,700 "	1,920,000

Work To Be Done With Appropriated Funds

	<u>Quantity</u>	<u>Obligation</u>
New Bridges	35	\$ 843,700
Temporary bridges to be replaced with bridges	31	495,800
Temporary bridges to be replaced with culverts	39	202,900
Timber access roads, new	24.2 miles	1,233,875
Timber access roads, reconstruction	16.1 "	92,300
All-purpose roads, new	20.1 "	225,400
All-purpose roads, reconstruction	45.9 "	262,400
Surveys and plans, timber access roads	1,765.3 "	1,590,625
Surveys and plans, all-purpose roads	73.9 "	40,800
Construction engineering, timber access roads	1,715.9 "	496,925
Construction engineering, all-purpose roads	9.3 "	8,000
Expense supplementing purchaser construction	- -	372,100
Trail construction	4.0 "	6,500
Trail reconstruction	93.5	142,500
Maintenance of roads	12,000 "	635,800
Maintenance of trails	12,600 "	272,600
Restoration of roads	66.6 "	264,100
Restoration of trails	66.0 "	48,790

Progress

Accomplishments on the transportation system for F. Y. 1958 were as follows:

Work Done With Appropriated Funds

	<u>Accomplishments</u>	<u>Obligation</u>
New bridges	20	\$1,047,965
Temporary bridges replaced with bridges	33	813,057
Temporary bridges replaced with culverts	40	139,709
Timber access roads, new	24.8 miles	2,871,469
Timber access roads, reconstruction	8.6 "	892,506
All-purpose roads, new	30.2 "	396,816
All-purpose roads, reconstruction	25.6 "	129,437
Surveys and plans, timber access roads	1,373.0 "	1,799,743
Surveys and plans, all-purpose roads	70.7 "	52,146
Construction engineering, timber access roads	1,123.4 "	375,407
Construction engineering, all-purpose roads	36.1 "	9,875
Expense supplementing purchaser construction	- -	375,548
Trail construction	14.1 "	47,580
Trail reconstruction	88.1 "	121,309
Roads maintained	12,110.8 "	680,247
Trails maintained	12,864.1 "	310,312
Roads restored	75.1 "	240,002
Trails restored	69.4 "	56,368

Work Done Through Timber Sale Contract

Bridge construction and replacement (temporary)	14	144,546
Road construction	1,098.5 miles	20,599,835
Road reconstruction	294.6 "	2,422,556
Engineering on purchaser roads	423.1 "	321,548
Roads maintained	8,163.8 "	1,777,855

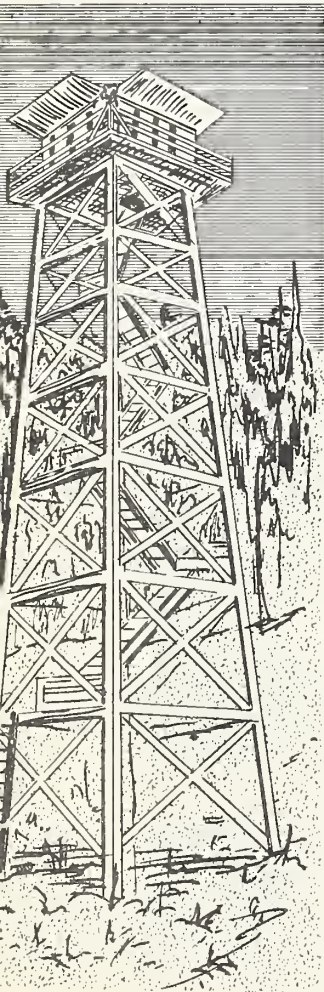
The use of electronic computers for road design was started during the year. This has resulted in the release of a considerable number of men from office work for field work. To date approximately 115 miles of road have been designed by electronic computers. This mileage will be increased considerably in 1959 and succeeding years.

A complete revision of the Byrne-Nelson-Googins "Cost of Hauling Logs by Motor Truck and Trailer" was undertaken.

Twenty-five northwest companies engaged in hauling logs have been studied to obtain present-day hauling costs based on total volumes hauled and total mileage covered in 1957. Substantial changes in basic hauling factors have been determined. Publication is planned in early 1959.

Forest Highways

During 1958, the Bureau of Public Roads awarded contracts amounting to \$4,790,330 covering 81.6 miles of forest highway construction. Forest highways are the principal roads into and through the national forests and are of nationwide significance for transportation and development of natural resources, national security, and the general welfare. A great portion of cross-Cascade-Mountain traffic moves via forest highways. The program of construction is prepared jointly by the State, Forest Service, and Bureau of Public Roads.



Water Developments

During the pas year 12 wells were drilled and 6 water systems constructed at ranger stations and campgrounds on national-forest lands. Two dams on forest lands were designed and constructed, one 28 feet and the other 9 feet high.

The work programmed for 1960 includes 7 wells, 12 water, and 2 sewer systems. One dam is being designed for possible construction.

Architecture

In addition to making building plans for residences, offices, warehouses, and crew quarters, we started to design a new series of lookout towers. These plans are in the final drafting stage. When complete, the standard lookout tower series will consist of 20, 30, 41, 50, 67 and 82-foot towers.

Cartography

Planimetric mapping is approximately 95% complete. Aerial photography, field control mapping, field edit, and drafting of about 73,000 square miles have been completed. The maps are drawn in 15 minute quadrangles on a scale of 2" = 1 mile. About 4,000 square miles are incomplete and programmed for 1959.

Planimetric map maintenance is also progressing as scheduled. In this phase of the program, planimetric maps are brought up to date before compiling new forest series maps. At the end of 1958 approximately 45,000 square miles of maintenance were completed. About 16,000 square miles are scheduled for 1959.

Forest series maps were completed for the Gifford Pinchot, Mt. Hood, Rogue River and Snoqualmie. They were published on a scale of $1/2" = 1$ mile in four colors: culture in black; drainage and other water areas in blue; national forest lands in green and main motor roads accentuated in red. This makes a total of ten forests completed to date, all based on up-to-date planimetric maps. Four more are scheduled for 1959: Deschutes, Siuslaw, Umpqua and Willamette. Our goal is to complete the entire 19 forests in Region 6 by the end of 1960.

Recreation folder maps were prepared for the Willamette, Snoqualmie and Wenatchee forests. The program for 1959 includes the Deschutes, Mt. Hood and Rogue River forests on a scale of $1/4" = 1$ mile.

Forest Transportation System maps, scale $1" = 1$ mile were revised for the 111 ranger districts. These are now in the process of being colored.

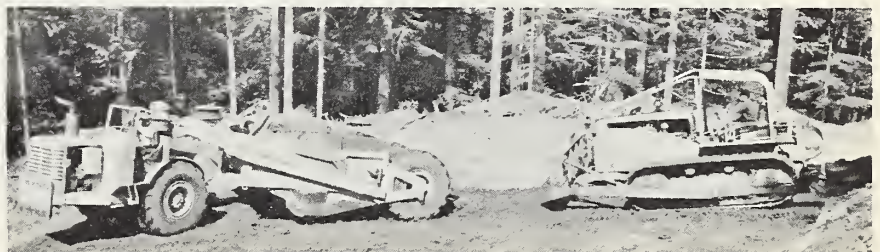
Topographic mapping during the calendar year included six projects averaging from five square miles to ten square miles in area on the Willamette, Mt. Baker, and Gifford Pinchot forests. Aerial photography was completed on the Siskiyou, Umpqua, Rogue River and Wenatchee forests covering approximately 3,600 square miles on a scale of 1:12,000. Contracts were let on an additional 4,000 square miles on the Mt. Hood and Gifford Pinchot forests on a scale of 1:12,000.

Problems

We face the challenge of building a system of roads in some of the most rugged terrain in the United States. Because the Cascade Mountains are of recent origin, their soils are suspended in a more precarious balance than in older mountains. The best road location practices are needed to protect streams and prevent release of large soil masses. In critical areas we must decide whether timber can be harvested without roads in these circumstances. Or can we develop other means of transportation. Vegetative cover on new slopes holds soil in place, and we plan to develop methods to accomplish this.

The rapidly expanding use of the national forests for recreational use has presented the problem of supplying safe, adequate water as well as a sanitary environment at a great number of public-use areas. We will be taxed to the utmost to keep abreast of public use.

Great quantities of soil must be moved in road-building operations.



STATE AND PRIVATE FORESTRY

Congress has recognized the importance of state, private and other non-Federal forest lands by having passed a number of "enabling" acts" providing Federal cooperation with States and private landowners to assist in keeping the lands protected and fully productive. Financial and technical assistance is being provided to forest landowners both large and small. These Federal-State cooperative programs are commonly referred to as: Cooperative Forest Protection, Cooperative Tree Planting, Farm Forestry, General Forestry Assistance, Agricultural Conservation and Soil Bank Programs. Total Federal funds made available to the State Forestry Departments in Oregon and Washington for assistance in these cooperative programs for the current fiscal year were \$1,265,906. In addition, there were substantial payments to forest landowners for planting and for cultural work done under the Soil Bank and Agricultural Conservation Program.

Cooperative Forest Protection

Plans. Current plans are to continue the cooperative forest protection program at a high level. New techniques in the control of fire are continually being tried. The suppression of fire through the use of aerial tankers, chemicals and helicopters proved highly successful during the year. Special training was given in the behavior of "blow up" fires and how to control them.

Progress. Good progress is being made in providing adequate fire protection for the 24 million acres of private and other non-federal forest lands in Oregon and Washington under the Cooperative Protection Program. Despite a more severe than average fire season, fire losses in 1958 were held to an acceptable level. During the fire season a total of 1,106 fires occurred on lands protected by the State of Oregon burning 12,376 acres. In the State of Washington 1,593 fires accounted for 16,170 acres burned.

Problems. The major problem in control of fires in the region is the existence of snags and large contiguous areas of unburned logging slash. Excellent progress is being made in elimination of snags through State fire laws. Additional effort is needed to reduce the slash hazard, either through elimination of the slash or through increased utilization of the left-over materials.



Farm Forestry-CFM

Plans. In cooperation with the Forest Service under the Cooperative Management Act of 1950, the State Forester of Oregon employs 4 farm foresters and the Supervisor of Natural Resources in Washington employs 10 farm foresters. These foresters stimulate and assist the people in their communities on all manner of forest problems, including tree planting, soil bank plans, thinning and pruning, etc. They assist in solving problems of marketing small products and commercial thinnings. They normally refer larger sales to consultants.

Progress. These few men cannot cover all the area in which assistance is needed, nor can they give adequate help to those who request it within the districts assigned to them. However, during 1958 they were able to give assistance to 3,136 owners in managing 116,608 acres. With their advice, the owners were able to obtain \$431,660 from marketing their products.

Federal aid for this program during F. Y. 1958 amounted to \$16,162 for Oregon and \$19,768 for Washington. This is approximately 30% of the total cost of the program for the two States.

Problems. There are 83,912 owners of commercial forest land in the Region. Of these only 216 have 5,000 acres or more of forest land. Most of these 216 and a few others hire their own forestry staff or hire forest consultants to assist them in managing and marketing. The remaining small woodland owners, more than 80,000 in number, must largely depend upon public foresters for such assistance.

Cooperative Tree Planting - C-M 4

The Forest Service has been encouraging the planting of idle land by assisting both States in producing trees at a nominal cost under Section 4 of the Clarke-McNary Act. At present the trees are being sold at about the cost of production and the nurseries are largely self-sustaining except for cost of expansion. The Federal assistance last year was \$18,168. Though this was a relatively small part of the total cost, it did stimulate greater production of trees suitable for small planting jobs.

Rural Development

This program was designed to encourage local people on low income rural land to improve their standard of living. The Forest Service has been working with other agencies in developing Lincoln County as a pilot county in Oregon. Since this is a forest economy county, the opportunities of increasing their forestry possibilities are being explored. The Siuslaw forest has put on the equivalent of one extra man to make available more small sales within the county. Other efforts are being made to stimulate other forest industry activities and obtain better utilization. The State Forester plans to have this area covered by a farm forester under the CFM program.

Agricultural Conservation Program (ACP)

The Forest Service assists the county and state ASC committees in the formulation of the Agricultural Conservation Program. It also develops the specifications for the forest practices and is responsible for providing service to farmers electing these forestry practices. Through this program the landowner is given financial assistance to establish conservation practices, including planting forest trees and caring for established stands of trees. Forest Service field responsibilities are carried out through the cooperation of the State Foresters.

Agricultural Act of 1956

Plans. Under Title IV of this Act, the Forest Service was given authority to assist in restocking non-Federal land up to the amount spent by the States.

Progress. During 1958, we reimbursed the States of Oregon and Washington under this program \$102,521 of the \$352,448 which they spent on rehabilitating a portion of their state-owned lands, including Oregon School of Forestry land. The two States together restocked 25,220 acres by planting or seeding during the year.

Problems. The nonstocked land in Oregon and Washington in all ownerships was reported by the Timber Resource Review of 1952 to be 2,692,000 acres.

Plans. Under the Soil Bank section of this Act, the Forest Service was authorized to provide trees and technical assistance to the farmers and others who wished to divert cropland to forest land. Through cooperative agreements with the State Foresters of Oregon and Washington, Region 6 gave financial assistance to the States to raise trees for this program in their nurseries at Elkton in Oregon and near Tumwater in Washington.

Progress. Oregon had about 3½ million trees available as its first crop from the Elkton nursery as well as about 4½ million trees at its older nursery at Corvallis. Washington had about 21 million trees to contribute to field planting from its Tumwater nursery with 13 million available to the general public. Through the State Foresters, we were also able to provide technical assistance in planting cropland to forest trees. The total land diverted under the Conservation Reserve phase of this Act at the end of planting season of 1957-58 amounted to 7,803 acres in these two States.

Problems. Many farmers have marginal land which should be converted from cropland to woodland but it seems difficult for them to realize the potential value of trees or to be convinced it is wise for them to tie up their land for the 10 years under the contract.

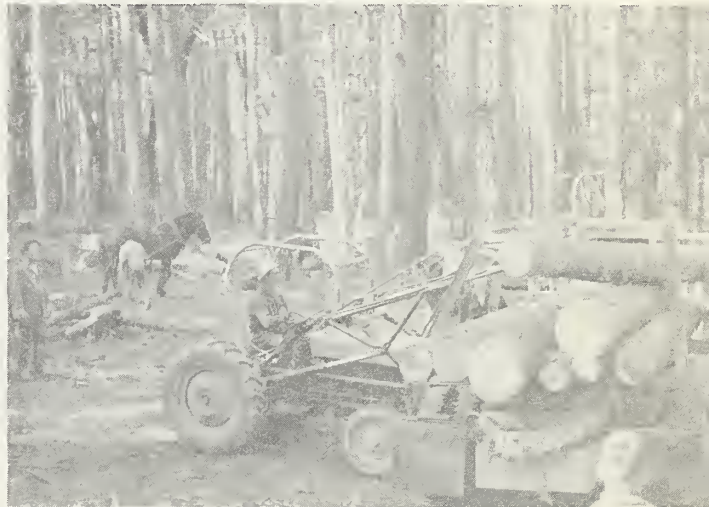
General Forestry Assistance

Plans. The general forestry assistance program provides technical assistance to private landowners, states, and other public agencies. The overall objective is to maintain and improve continuous production of forest products on all types and sizes of forest ownerships. Activities during the past year included assistance

to woodland owners with specific problems, participation in county conservation demonstrations for school children, and publication of the booklets "Production and Marketing of Christmas Trees in the Pacific Northwest" and "Regulations Affecting the Cutting, Transporting and Marketing of Christmas Trees and Boughs Grown in Oregon and Washington". Priority was given to the problem of increasing productivity on small forest ownerships in the Pacific Northwest.

Progress. The Timber Resources Review emphatically emphasized the importance of small forest properties, and the need to increase production on these lands. Although some small woodland owners are practicing intensive forestry, management on these properties does not compare favorably with that on public or industrial forest lands. Potential production from small woodlands is great. In the Pacific Northwest, small ownerships comprise about half of the total private commercial forest land. They generally occupy the better sites and are accessible to markets. The greatest forestry problem facing the Nation today is how to encourage many small woodland owners to attain full timber production on their lands, and thereby insure future returns to themselves and an adequate flow of forest products to supply the growing demands of our expanding population.

The Forest Service and the State forestry departments co-sponsored a series of small ownership meetings in order to learn the problems of the small woodland owners. State meetings for Oregon and Washington were preceded by a series of eleven area meetings which were held throughout the two states to stimulate interest and thinking on a local level in preparation for the State meetings. More than 1,000 persons attended the State and local meetings. About 50% of those attending were small woodland owners. Others included spokesmen for forest industries consulting foresters, public foresters, state extension people, and members of forestry organizations, educational institutions, finance organizations and Soil Conservation Districts. This well-rounded audience freely and spontaneously contributed many oral and written statements concerning their views on problems facing small woodland owners.



Small woodlands are important in the total production of wood for the Nation.

Problems. The following six problems were expressed most frequently at these meetings:

1. Need for field assistance by technical foresters and further use of forestry demonstrations.
2. Need for more equitable tax system.
3. Need for marketing outlets that will utilize thinnings and other intermediate products.

Problems (cont'd)

4. Stepped up research program which will provide the forester with better information on woodland forestry.
5. How to grow and manage young timber especially stand improvement and reforestation techniques.
6. Better dissemination of information which is adaptable to local conditions.

OPERATION

Plans and Programs

The 5-year regional program to provide needed housing and structures for field personnel continues, and also the improvement in communications networks. Space and property management, purchasing and supply, mail, messenger and duplicating services have all been centralized into an administrative services section. A new analysis of workloads will reveal changes and needed organization. The previous complete study was made in 1954. A revised uniform work-planning system, developed during the year, will provide basic uniformity with sufficient flexibility for differences in type of work, organization size and working conditions. Testing on six forests precedes final adoption by all forests on July 1, 1959. New service-wide Directives System replaces the old Forest Service Manual, Handbook and filing scheme.

Progress

Housing

During calendar year 1958 construction, under contracts, was completed on 40 residences, 7 offices, 2 warehouses, 4 lookout houses and 5 buildings for work crews. Two new seed-storage and tree-packing buildings were constructed at nurseries. Additional contracts were awarded for 2 residences, 2 offices, 2 oilhouses, 2 warehouses and 5 water systems which are now under construction. One warehouse and 8 buildings to house crews are being constructed by Forest Service crews. Several substandard buildings and inadequate water systems have been improved.

Communications

Because of excessive interference in the 30 megacycle radio band, it has been necessary to convert to 160 megacycles. Conversion was completed on one forest, and 221 new radio units were purchased for the conversion of 2 other forests to the 160 megacycle band. This leaves 16 more forests to be converted. Four new radio relay installations were designed and installed and resulted in expanded coverage into areas not previously reached by radio. Communications replanning was completed on 4 national forests during the year. Training forest technicians has been increased to keep up with new techniques, equipment, and increased use of our networks.

Workload Analysis

Workload analyses for recreation, land use, and grazing were completed during the year. We are currently measuring measuring the correlated workload for fire control, timber management and sales, wildlife management, watershed management, land adjustments, improvements, information services, and personnel management. The engineering and current clerical workload are being programmed for analysis.

Administrative Services

During the past year bids were solicited and contracts let for 115 projects totalling \$2,965,242. One of the major projects was the 1958 spruce budworm control program.

The regional fire cache was reorganized and adapted to machine handling of the various items. Handling time for maintenance and issuance of supplies and equipment was reduced an estimated one-third. We tried and will continue selling vehicles, to be retired from official use, at various field locations rather than at Portland.

Problems

The increasing demands upon our forest resources have brought an expansion of the organization to keep pace. The location of the work in remote areas calls for government housing, since private rentals are not available. Unfortunately our housing program has not yet matched the expansion of the organization.

Many problems of radio interference from the military faced us this year. About 1/2 of the cases have been successfully eliminated. Maintenance of radio networks has increased in cost. We still must replace obsolete equipment with modern sets on a network basis.

Expansion of work programs has increased the size of forest supervisor's staffs and needs for office space have increased proportionately. Some adjustments have been made but more are needed.

PERSONNEL MANAGEMENT Plans and Programs

Manpower needs, recruitment and training

The well established regional and local training program includes: orientation of new employees, planned technical training, on-the-job training, and shifting to several fields of work the first several years. Group training is prominent, training is generally decentralized, and self education is stressed.

Progress

Manpower was more plentiful in 1958 than since 1941. Manpower is generally expected to be adequate in 1959.

We employed 410 forestry students and 33 engineering students during the summer season. Except for shortages in this category on two forests the number of student applicants was just sufficient to fill the number of openings for summer jobs.

We appointed 143 graduate foresters (a record) during the year. Our needs for professional foresters were filled for the first time since world war II. Our only serious recruiting shortage is for highway and bridge engineers, 32 of whom are needed. We expect to fill most of these needs in 1959.

Group training was given as follows: orientation of 159 new professional employees, administrative management training for 72 men, road and bridge design courses, fire control training for employees at various levels and business management for new professional men in that field.

A regional safety school was held, and first aid training was given throughout the Region. Numerous functional staff training sessions were conducted. Five men from the Regional Office and 2 forest supervisors attended the Civil Service School on "Personnel Management for Federal Executives". We helped organize the Department of Agriculture's "Training in Administrative Management" workshop that was held in Portland January 26-30, 1959.

Altogether, 622 employees were given specialized formal training during the year.

Safety

Administration at all levels continued to emphasize preventing and analyzing accidents. Our injury frequency rate went up to 7.10 during the year. Analysis shows this was mainly due to the severe fire season. (Last year we had 4.22 disabling injuries per million man hours worked.) We had 53 lost-time accidents and 15 cases of occupational illness; 67 motor vehicle accidents and 14 cases involving other property damage. Four aircraft deaths occurred during firefighting. The spruce budworm spraying project, an extremely hazardous operation, was accomplished without serious lost-time injury and no fatalities. We participate actively with the National Safety Council in accident prevention programs. A strong effort is being made to reduce motor vehicle accidents. We require all motor vehicle operators to be tested. About 118 employees are being trained as driver examiners. Some 2,000 employees will be examined in accordance with Civil Service requirements.

Problems

As workloads increase, with the resultant growth in our organization, training becomes increasingly important if we are to have well-qualified individuals handling our many activities. Rapid turnover has been necessary in recent years. For example, about 50% of our employees have been in their present assignments less than 2 years; many less than 6 months. This will continue to be a problem as the organization expands.

INFORMATION AND EDUCATION

Requests from individuals and groups for information and education items and services increased. Maps, directories of national forest camps, informational brochures and leaflets, have been in great demand. There have been many requests for illustrated talks, assistance to writers, and information on conservation and national forests.

Conservation education continued to occupy an important position in our total job. Participation in conservation and outdoor education workshops for teachers was strengthened. We have initiated or cooperated with State and private foresters in the development of "Forestry Day" programs for elementary schools in several counties. Participation has been increased in school camping programs to strengthen conservation and outdoor education for children.

The Forest Service has 241 prints of 49 motion pictures. During fiscal year 1958 they were viewed 1,993 times by 145,162 people representing all ages. In addition to these we have one or more prints of a number of other films bearing on some phase of conservation. They are also loaned.

RESEARCH

Forest Service research is the responsibility of the Pacific Northwest Forest and Range Experiment Station. The Station issues a separate report, now being compiled. When issued it may be secured by writing to:

The Director:
Pacific Northwest Forest and Range Experiment Station,
P.O. Box 4059
Portland 8, Oregon

RECEIPTS AND EXPENDITURES - FISCAL YEAR 1958
Region 6
NATIONAL FOREST PROGRAMS

	<u>Receipts</u>	<u>EXPENDITURES</u>	
		<u>Operating</u>	<u>Investments</u>
National Forest Protection and Management & L. U. Projects		\$ 9,119,190	\$ 2,168,544
Fighting Forest Fires		965,677	11,823
Insect & Disease Control		690,857	15,942
Road & Trail System - Construction & Maintenance		1,660,994	9,435,786
Watershed Protection		29,044	80,681
Cooperative Deposits (Including timber deposits for stand improvement)			
Operating 37,240			
Investment 1,528,659	\$ 1,565,899	43,682	2,102,525
National Forest & L. U. Area Receipts			
Forest Reserve Fund	46,132,464		
Ore. & Cal. Lands (National Forest)	2,519,002		
Ore. & Cal. Lands (B.L.M.)	42,470		
Warm Springs Indian Lands	81,608		
Other Miscellaneous Receipts	151,856		
Totals	\$50,493,299	*\$12,509,444	\$13,815,301
Less Cooperative Deposits Investment Receipts	1,528,659		
Total Operating Receipts and Expenditures	\$48,964,640	\$26,324,745	

*
a. Operating Expenditures \$12,509,444
b. Estimated annual deprec. on roads, trails & other improvements in place on June 30, 1957 6,135,614
Total \$18,645,058

Amt. by which Receipts exceed operating expend. plus estimated depreciation \$30,319,582

Note: Expenditures are on an obligation basis.

Payments made to States of Oregon, Washington and California pursuant to 16 USC 500 (25% of resource receipts):

Oregon - \$7,700,319.07
Washington - \$3,779,033.16
California - \$ 53,763.88



Remember—**Only you can**
Prevent Forest Fires!

